

## pr.633 ROMEO

DATA FOR 2014 (standard replenishment)

pr.633 ROMEO

★★★★



Medium diesel-electric submarine ("S"). R & D was conducted by TsKB-112 (chief designer Z.A. Deribin, later A.K. Nazarov and E.V. Krylov) in accordance with the USSR Council of Ministers Resolution No. 1454-808 of August 9, 1955. The draft design was completed in April 1955 in two versions: according to the Navy requirements (Project 633) and an improved "initiative" (Project I-633). The projects were reviewed in May 1955 and the draft design I-633 was selected for technical design. The technical design was completed and approved by Resolution of the USSR Council of Ministers No. 1117-580 on August 15, 1956. The lead submarine of the S-350 series (factory No. 331) was laid down at the Krasnoye Sormovo shipyard in Gorky (slipway No. 3) on October 22, 1957 and launched on May 30, 1958. Factory sea trials were conducted from October 22 to December 20, 1958. State trials were conducted from December 21, 1958 to August 31, 1959 in the Black Sea. The S-350 was accepted into the Navy on August 31, 1959 and transferred to the Northern Fleet to continue trials. According to the initial plans, it was planned to build a series of 560 boats, but only 20-22 units were built (according to various sources). The submarines of Project 633 were built up to and including 1961 (the last boat of the series was delivered to the Navy on December 31, 1961). In the second half of the 1960s and in the 1980s, most of the submarines of the series were transferred for export.

Submarine pr.633 ROMEO (photo from the archive of salar1933, <http://foto.rambler.ru>).Author: [DIMMI](#)

Created: 08.06.2009 23:17:54

Comments: [36](#)[READ THE FULL ARTICLE](#) →

## Amur-1650VNEU - AMUR (project)

DATA FOR 2014 (standard update)

Amur-1650VNEU - AMUR (project)

★★★★



Large non-nuclear submarine ("B") with an air-independent propulsion plant. The development of a family of export submarines based on the non-nuclear submarine of Project 677 is being carried out by the Central Design Bureau of Marine Engineering "Rubin" (chief designer as of 2010 - Yu.N.Kormilitsyn). The development of the basic project (Project 677) began in 1987 - the boat was intended for the USSR Navy. After the collapse of the USSR in the mid-1990s, the development of the family of export submarines "Amur" began. According to the letter of the State Customs Committee of Russia No. 01-15 / 2317 dated 04.02.1998, the family of submarines "Amur" with a displacement of 200 to 2400 tons is included in the list of military products permitted for export.

The lead boats of the series - Project 677 "Lada" - B-585 (factory number 01570) and the lead boat Project 677E "Amur" (variant "Amur-1650") were laid down at the FSUE "Admiralty Shipyards" (St. Petersburg) on December 26, 1997. At the end of 2011, information appeared in the media that tests of the air-independent propulsion system (AIP) module were being conducted in Russia, which were planned to be completed in 2012. As of autumn 2012, the AIP was being developed by the Rubin Central Design Bureau for Marine Engineering - the developer has been allocated funding to create the system. Presumably, after the tests of the AIP module are completed, the submarine Project 677E "Amur-1650" or the third boat of Project 677 - "Sevastopol" may be completed using it.

A prototype of the air-independent power plant developed by the Rubin Central Design Bureau for Marine Engineering will begin testing on the B-90 Sarov submarine by the end of 2012 (media report from 10/30/2012). This plant is a prototype of the VNEU for the Amur-1650VNEU submarine and, possibly, Project 677. The VNEU runs on hydrogen fuel cells (source). On May 18, 2013, the Commander-in-Chief of the Russian Navy announced in the media that work on the first VNEU for the non-nuclear Project 677 submarine is expected to be completed in 2015-2016, and the Navy will receive its first boat with such a VNEU in 2016-2017 (source). On September 23, 2013, it was announced that the completion date of the prototype VNEU was 2016 (source).

On August 28, 2014, the media, citing the leadership of the Russian Navy, reported that the Fleet would begin operating submarines with

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[mpashnev](#) 2020-08-13 16:26[VA-111 Shkval M-5](#)

arma37@tank7 Wrote: From which book? t-95yes from the same... in neighboring topics the title was written by Sierra

[DIMMI](#) 2016-10-07 12:49[VA-111 Shkval M-5](#)

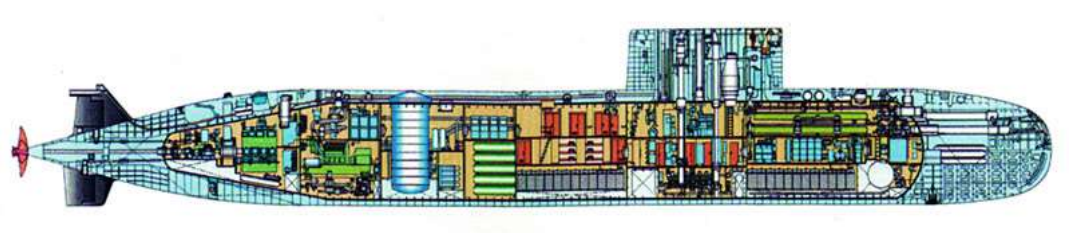
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[arma37@tank7](#) 2016-10-06 21:36[VA-111 Shkval M-5](#)

anaerobic power plants in 2017 ( [source](#) ).



Hull structures of the submarine "Amur-1650" project 677E on the embankment of the LAO, St. Petersburg, November 3, 2011 (photo by reflex-yu, <http://forums.airbase.ru> ).



Drawing of the submarine project "Amur-1650" with air-neutral power plant, 1990s ( <http://bastion-karpenko.narod.ru> ).

Author: [DlMMI](#) Created: 03.04.2012 23:58:02 Comments: [11](#) [READ THE FULL ARTICLE ->](#)

pr.949AM - OSCAR-III

DATA FOR 2014 (in progress)  
pr.949AM - OSCAR-II I  
K-132 "Irkutsk"  
K-266 "Orel"  
★★★★

Nuclear submarine with anti-ship cruise missiles (SSGN). The development of the project was started by the Rubin Central Design Bureau of Marine Engineering no later than 2011. The technical project was created within the framework of the R&D project "Project 949AM" and approved by the decision of the Ministry of Defense dated 13.02.2012, additions to the technical project were made on 05.04.2013 ( [source](#) ).

In order to carry out the mid-life repairs of the Project 949A SSGN with modernization according to Project 949AM, the technical re-equipment of the Far Eastern Shipyard "Zvezda" (Bolshoy Kamen) began in 2012.

On April 5, 2013, the State Contract for the modernization of the first Project 949A SSGN (plant No. 619) was signed between the Russian Ministry of Defense and the Far Eastern Shipyard "Zvezda". In May 2013, Zvezda Shipyard signed a contract with Rubin Central Design Bureau for the development of working design documentation for the modernization of the lead SSGN and the creation and assignment of weapons and military equipment for the modernization of submarines of Project 949AM. The contract amount is 12.012 billion rubles. The contract period is until the end of November 2017, while the development and delivery of working design documentation must be completed by January 2016 ( [source](#) ).

The name OSCAR-III is provisional.

An article for every occasion  
[Sierra](#) 2016-10-06 19:51

**[VA-111 Shkval M-5](#)**  
[Slaanesh](#) Wrote: although we may not need it, but India is interested) <http://www.ca-news.org...>  
[Artist](#) 2014-09-13 04:12

**[VA-111 Shkval M-5](#)**  
I accidentally saw an article on Wikipedia about the Dastan plant i Kyrgyzstan. This topic is nonsense  
[Artist](#) 2014-09-13 03:06

**[VA-111 Shkval M-5](#)**  
[Vladimir Vladimirovich](#) Wrote: Removed from service in the early 1990s (((This is a lie. Nothing...  
[Artist](#) 2014-09-11 21:02

**[VA-111 Shkval M-5](#)**  
although we may not need it, but India is interested)<http://www.ca-news.org/news/725931>  
[Slaanesh](#) 2011-07-05 13:03

**[VA-111 Shkval M-5](#)**  
Hmm, interesting, only surface targets are written. By the way. It's interesting, what is the epic...  
[Slaanesh](#) 2011-07-05 13:01

**[VA-111 Shkval M-5](#)**  
A small remark - a wonderful example of the German trace. A magnificent development of their ideas. :beer:  
[Sierra](#) 2011-05-30 01:40





SSGN K-132 "Irkutsk" project 949A (photo from the archive of Rambo54, <http://militaryrussia.ru/forum> ).

Author: [DIMMI](#)

Created: 08.12.2013 10:19:44

Comments: [2](#)

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## P-20 Falcon

**DATA FOR 2014 (standard update)**

**P-20 "Falcon"**

**P-20S**

**P-22**



A long-range sea-based flying missile / cruise missile (since 1959). Developed by OKB-240, Chief Designer S.V. Ilyushin. Development of the sea-based flying missile was initiated by Resolution of the USSR Council of Ministers No. 551-328 of April 19, 1956. The resolution prescribed that testing of the flying missile from a Project P-627A submarine should begin in 1959. In August 1956, the USSR Council of Ministers approved a seven-year plan for the construction of the Fleet, which included the construction of an experimental Project P-627A SSGN with a P-20 flying missile. Following the experimental SSGN, it was planned to lay down a series of Project 653 boats with two missiles each.

By the Resolution of the Council of Ministers of the USSR of August 20, 1957, higher characteristics of the flying projectile were set - the maximum speed was increased to 2750-3000 km/h at a flight altitude of 22-24 km, the range - to 2500-3000 km. In 1957, the development of a ground-based flying projectile variant began.

The development of this type of flying projectile necessitated a large amount of research work. In particular, models of the flying projectile, enclosed in wooden casings, were fired from artillery guns using detachable metal pallets. After leaving the barrel, the casings were divided into halves and discarded, the pallet was separated, and the model continued its flight like a sub-caliber projectile. Several successively placed wooden frames with paper stretched over them, equipped with wire sensors, served as targets. Behind the shields there was a sand embankment catching the models. During the experiments it was possible to determine the stability of the flight, the angles of attack, and by the drop in speed — the magnitude of the longitudinal and transverse aerodynamic forces. Then they moved on to dropping larger objects weighing up to 200 kg from aircraft. After separation from the carrier at an altitude of 11 km, the solid-fuel engine installed on the model was switched on, accelerating it in 3 seconds to a speed three times greater than the speed of sound.

Then, throwing tests of a full-size P-20 model with full-scale solid-fuel boosters were started at the Faustovo test site near Moscow. Two launches were carried out — in December 1959 and early 1960.

By the Decree of the USSR Council of Ministers of February 5, 1960, the development of the cruise missile was terminated when the first flying prototype was 90% ready. The reason was the customer's refusal of a missile of this type due to the completion of tests of other models of cruise missiles.

Drop tests of the P-20 flying missile from a ground launcher ( [source](#) ).Author: [DIMMI](#)

Created: 22.05.2014 23:06:42

Comments: [3](#)[READ THE FULL ARTICLE →](#)

### pr.20120 - SAROV

**DATA FOR 2014 (standard update)****pr.20120 - SAROV**

B-90 "Sarov"

★★★★



Experimental large diesel-electric submarine ("B"). The development of the preliminary design of the Sargan test boat was completed by the Rubin Central Design Bureau of Marine Engineering in March 1988. Chief Designer - A.V. Belov. In March 1989, the technical design was approved and the release of working drawings of the boat began. There is an assumption that the hull design was based on the submarine project [877B](#) . The only submarine of the Sargan project - B-90 (factory No. 137) - was laid down at the Krasnoye Sormovo shipyard (Nizhny Novgorod) on September 18, 1988 with a planned delivery date to the Fleet in 1993. Construction of the boat was stopped in 1998 with a readiness of 40%.

The decision to complete the experimental submarine at PO Sevmash was made in October 2001. The hull of the submarine Sargan was delivered for completion according to the modified (June 2003) project 20120 (chief designer A.P. Praselin) to workshop No. 42 of PO Sevmash in Severodvinsk in August 2003. The responsible person delivering the boat was B.N. Sorokin, the delivery mechanic was Yu.S. Melchakov. The keel board was reinstalled on the submarine on March 19, 2006 (2007 according to other sources). On May 26, 2007, by order No. 025 of the Commander-in-Chief of the Navy, the submarine was named Sarov. On December 14, 2007, the submarine was taken out of the assembly shop of PO Sevmash and launched on December 24, 2007 (in Severodvinsk). Mooring trials began on January 1, 2008. In July 2008, the submarine successfully passed factory sea and state trials and was accepted by the Russian Navy on August 7, 2008. It is based in the Northern Fleet (2009-2012 - Severodvinsk).





Experimental submarine pr.20120 B-90 "Sarov", photo version without retouching (photo - <http://sevmash.ru> , 2008).Author: [DIMMI](#)

Created: 01.07.2009 23:39:33

Comments: [124](#)[READ THE FULL ARTICLE →](#)

## 100mm AK-100 mount

**DATA AS OF 2014 (standard replenishment)****Complex AK-100-MR-114, installation AK-100 / ZIF-91 / A-214****Complex AK-100-MR-145**

★★★

1 x 100-mm artillery mount. Development began at TsKB-7 (PO Arsenal) in accordance with the Resolution of the USSR Council of Ministers in June 1967. The specifications were approved in September 1967. The technical design was approved in March 1969. Factory tests of the prototype were conducted in 1971-1972. State tests began at the Rzhevka proving ground on March 15, 1973. Production of the pilot batch began at PO Arsenal in 1974. The mount was accepted into service in 1978.



Fire is conducted by a 100-mm AK-100 installation of the frigate "Hetman Sahaidachny" project 11351 of the Ukrainian Navy, April 2014 ( <http://militaryphotos.net> ).

Author: [DIMMI](#)

Created: 22.01.2009 22:46:51

Comments: [8](#)[READ THE FULL ARTICLE →](#)

## R-29RMU2.1 / R&D Liner

**DATA AS OF 2014 (standard replenishment)**

**D-9RMU2.1 complex** , R-29RMU2.1 "Liner" missile Submarine-launched ballistic missile (SLBM) with intercontinental range / R&D "Liner". Developed by the Academician V.P. Makeyev State Research Center (formerly SKB-385, Miass), Chief Designer - Yuri Andreevich Kaverin, Lead Designer - B.A. Smirnov ( [source](#) ). Development of the R&D "Liner" theme was started by the decision of the Russian Ministry of Defense and the Military-Industrial Complex under the Council of Ministers of Russia in 2008. Probably, the preliminary design for the "Liner" theme was prepared in mid-2009 and in June 2009 a meeting of the chief designers was held at which the work procedure and deadlines for their implementation were adopted. Development of the R&D "Liner" was completed on March 31, 2011 ( [source](#) ). During 2010, vibration tests of the 1E1.50.00.000 mockup were conducted under the Liner R&D project. The first launch under the joint flight test program of the SLBM was conducted from the K-84 Ekaterinburg SSBN (plant no. 380) of Project 667BDRM - DELTA-IV on 20 May 2011 from the Barents Sea towards the Kura test site in Kamchatka. The launch was successful. Based on the results of these tests and the conclusion of the Interdepartmental Commission, the design, operational and technological documentation was approved for serial production and operation. The second launch of the Liner missile was conducted on 29 September 2011 from the Barents Sea towards the Kura test site in Kamchatka; the launch was conducted by the K-114 Tula SSBN of Project 667BDRM. On October 6, 2011, the media reported the completion of the flight test program for the R-29RMU2.1 Liner SLBM. The missile production has been established at the Krasnoyarsk Machine-Building Plant OJSC and, as of 2011, the R-29RMU2 Sineva missiles, which are fully unified with the R-29RMU2.1 Liner missiles, are in serial production. The missile, created under the theme of the Liner R&D project, is a modification of the R-29RMU2 Sineva / RSM-54 missile with the use of a larger number of warheads in the combat equipment and, probably, with an updated missile control system. After the Liner SLBM is accepted into service, the Project 667BDRM SSBNs can serve until 2025-2030. Finally, on February 9, 2012, the Commander-in-Chief of the Navy Vladimir Vysotsky announced that all operational Project 667BDR and BDRM SSBNs would be re-equipped with the Liner SLBM. On January 31, 2014, based on a decree of the Government of Russia, the D-9RMU2.1 missile system with the R-29RMU2.1 Liner missile was accepted into service by the Russian Navy (Designer. No. 2 / 2014).

★★★



Submarine - carrier of SLBMs, created according to the R&D "Liner" - SSBN K-114 "Tula" pr.667BDRM - DELTA-IV during its launch into the launching pool of the shipyard "Zvezdochka", Severodvinsk, May 2004 (photo by V.I. Kovpak, <http://www.submarines.narod.ru> ).

Author: [DIMMI](#)

Created: 16,08,2011 16:39:22

Comments: [130](#)

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## Project 12322 Bison - POMORNIK

DATA AS OF 2014 (standard replenishment)

pr.12322 "Zubr" - POMORNIK

pr.12322E

pr.958 "Bison" (Ukraine)

★★★



Small landing craft on an air cushion. Development of the landing craft on an air cushion (LHC) was started in 1978 by the Almaz Central Marine Design Bureau. The new LHC project was created using the developments of the LHC of Project 12321 "Dzheyran". The preliminary design was developed by the Deputy Chief Designer of the Almaz Central Marine Design Bureau G.D.Koronaov. The chief designers of Project 12322 are L.V.Ozimov, Yu.M.Mokhov and Yu.P.Semenov. The lead LHC of Project 12322 MDK-51 entered service with the Navy in 1988. The design of the serial ships of the project differs in modifications.

As of 2014 (and earlier), the LHC of Project 12322 "Zubr" is the largest LHC in the world.





Exit from the water of the hovercraft project 12322 "Zubr" of the Russian Navy ( <http://belostokskaya.ru> ).

Author: [DIMMI](#)

Created: 25.09.2012 11:39:32

Comments: [39](#)

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## pr.613 - WHISKEY

DATA FOR 2014 (standard update)

pr.613 WHISKEY-I (basic project with artillery armament)

Project 613 WHISKEY-II (basic design with a bow artillery machine gun)

Project 613 WHISKEY-III (basic design without artillery armament)

Project 613 WHISKEY-IV (basic design with aft artillery machine gun)

pr.613 WHISKEY-V (modernized basic design)

★★★★



### pr.613 WHISKEY - status, export, sources

Medium diesel-electric submarine ("S"). The development of the boat was carried out on the basis of the project of the medium-displacement boat of pr.608 TsKB-18 (1942-1944), and also taking into account the study of technical documentation and samples of German submarines (sunk on July 30, 1944 in the Gulf of Finland and later raised by U-250 and captured boats of the XXI series). Also taken into account were the works on the SP-46 topic (TsKB-18, January-April 1946, study of the implementation of possible technical specifications for the submarine of pr.613). The boat project was developed in TsKB-18 (later renamed TsKBMT "Rubin"), chief designer - V.N.Peregudov, later - Ya.E.Evgrafov, since 1950 Z.A.Deribin. The tactical and technical assignment for Project 613 was approved in August 1946 based on proposals from TsKB-18 on the SP-46 project. The draft design was approved on October 20, 1947. The technical design was approved on August 15, 1948 by Resolution of the USSR Council of Ministers No. 3110-1258.

The submarine was the first in the USSR to be built using a flow-sectional method with extensive use of automatic welding with radiographic control of welds, and extensive unification of components and materials was used. Preparations for production at the Nikolaev and Gorky plants began in 1948. The lead submarines, S-80 (factory No. 801, Gorky, Krasnoye Sormovo) and S-61 (Nikolaev), were laid down on March 13, 1950 and April 11, 1950, respectively, and launched at 70% readiness on October 21, 1950 and July 22, 1950. S-61 underwent hydraulic tests at the plant on June 26, 1950. Submarine S-80 arrived at the plant's acceptance base in Baku on November 1, 1950 and underwent tests from December 31, 1950 to April 26, 1951. Deep-sea tests were completed on June 9, 1951. S-61 on November 6, 1950 g. capsized while leaving the dock, flooding several compartments. Mooring trials began on 12 January 1951 and 5 May 1951, respectively. Submarine S-61 moved to Sevastopol, where she underwent deep-sea trials (14 July 1951) and state acceptance trials from 17 October 1951 to 24 May 1952.

Both lead submarines were accepted into the Navy: S-80 on 2 December 1951 and S-61 (Captain A.F. Nadezhdin) on 24 May 1952. In 1953, supervision of production of submarines of Project 613 was transferred from TsKB-18 to SKB-112 (since 1955 TsKB-112, Chief Designer Z.A. Deribin), created at the Krasnoye Sormovo plant (Gorky). A total of 340 submarines of Project 613 were planned to be built, 215 submarines were built from 1950 to 1957 at plants in Gorky, Nikolayev, Leningrad and Komsomolsk-on-Amur. Submarines of Project 613 entered service with the Navy starting in 1952 and were in service until 1993 (at least the Black Sea Fleet, S-384), including as training submarines. By default, these are submarines of Project 613.



Submarine S-338 pr.613 WHISKEY-V. Naval parade on the Neva in Leningrad, July 1987 ( <http://flot.com> , processed).

Author: [DIMMI](#)

Created: 12.05.2009 17:15:25

Comments: [10](#)

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### pr.11430 - VIKRAMADITYA

**DATA AS OF 2013 (standard replenishment)**

**project 11430**

"Admiral of the Fleet of the Soviet Union Gorshkov" / "Vikramaditya"



Aircraft carrier / light multipurpose aircraft carrier - a variant of rebuilding the heavy aircraft-carrying cruiser project [11434](#) into an aircraft carrier with a ski-jump (angle of inclination 12.5 degrees) takeoff of conventional deck aircraft. The ship has been stripped of its weapons and its equipment has been modernized. The ship is intended for the Indian Navy and is undergoing modernization at PO Sevmash (Severodvinsk) under the name "Vikramaditya". Designer - Nevskoye Design Bureau, Chief Designer - B.V. Shmelev. The project provides for two launch sites with gas-deflecting shields. Installation of Indian-made electronic equipment and systems is expected to be carried out in India at a shipyard in Cochin. The aircraft carrier's delivery to India as of 2010 (and later) is scheduled for December 4, 2012. Due to problems with the propulsion system boilers discovered by September 17, 2012, the ship was returned to PO Sevmash for modifications. The final delivery of the ship to India is scheduled for the end of 2013.

The first touchdown of the MiG-29KUB aircraft on the aircraft carrier deck was made on July 17, 2012, the crew being Nikolay Diorditsa and Mikhail Belyaev. The first landing of the aircraft on the aircraft carrier deck took place on July 29, 2012. The landing was made by the MiG-29KUB aircraft, the crew being Nikolay Diorditsa and Mikhail Belyaev. On the same day, the aircraft took off from the aircraft carrier and landed again.

On March 27, 2013, the management of PO Sevmash made [a number of statements](#) :

- repairs to the aircraft carrier's main propulsion plant boilers should be completed in May 2013
- aircraft carrier trials are planned to be conducted from July 3 (confirmed on June 26, 2013) to September 30, 2013
- the ship's Indian crew of 1,326 people will also be on board during the state trials of the aircraft carrier
- joint trials of the air wing and the ship are planned to begin on August 3, 2013 in the Barents Sea (confirmed on June 26, 2013).
- the aircraft carrier is planned to be handed over to the Indian Navy on November 15, 2013, followed by a transfer to its permanent home base in India (confirmed on June 26, 2013 and September 29, 2013).



Return to Severodvinsk from testing of aircraft carrier project 11430 "Vikramaditya", 20.09.2013 (photo - Oleg Kuleshov, <http://kuleshovoleg.livejournal.com/> ).





Aircraft carrier pr.11430 "Vikramaditya" during sea trials. 2013 ( <http://www.livefirstdefence.com/> ).



Aircraft carrier project 11430 "Vikramaditya" goes to sea for sea trials. Severodvinsk, July 3, 2013 (photo - Yuri Gnatyuk, <http://gnatyuk.livejournal.com/> ).



Aircraft carrier project 11430 "Vikramaditya" in the Barents Sea, September 14-15, 2012 (photo - Igor Kondranin, [source](#) ).



Aircraft carrier INS Vikramaditya of the Indian Navy and SSBN Dmitry Donskoy of project 941UM at PO Sevmash in Severodvinsk, photo - November 2011 (photo from the archive of nosikot, <http://navy-rus.livejournal.com> ).

Author: [DIMMI](#)

Created: 19.04.2012 19:51:09

Comments: [39](#)

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## pr.1710 / 01710 Mackerel - BELUGA

**DATA AS OF 2013 (standard replenishment)**

**project 1710 / 01710 "Mackerel" - BELUGA**

CC-533

★★★★★



Medium special (experimental) diesel-electric submarine ("SS"). Developed by SPMBM "Malakhit", chief designer G.P. Moskalov, scientific director of the submarine creation - V.M. Pashin (Krylov Research Institute). The submarine was created to study the behavior of a new hull shape in water, as well as for experiments with the injection of polymer solutions to reduce hydrodynamic resistance. The development of the submarine began in 1982. Submarine SS-533 (the only one built, factory No. 01620) was laid down at the Sudomek plant (Leningrad) on October 22, 1985, launched on October 5, 1986. The submarine was completed afloat in the waters of the former Novo-Admiralty Plant using the SPD-2M floating dock for work on the underwater part of the hull. Chief Builder - S.P. Zelensky, Person in Charge - V.M. Ilyin, Delivery Mechanic - Yu.K. Uchaev. Mooring trials of the submarine were held from October 14 to November 23, 1986. Factory sea trials were held in the Black Sea (Balaklava) from the end of 1986 to October 29, 1989 after the submarine was transported there by inland waterways.

The submarine was accepted by the Navy on December 19, 1987 (Black Sea Fleet). In 1992, experimental studies on the submarine were stopped. After several years of operation and experiments, the submarine was decommissioned from the fleet (2002) and disposed of (cut into scrap metal) in Sevastopol. The name of the submarine SS-533 - "Forel" - is also encountered - an erroneous one.

According to one version, work on the project of an experimental submarine-laboratory for studying flow processes was started in SKB-143 (now SPMBM "Malakhit") back in 1960. The technical project was developed in 1975. Construction on Project 1710 began only in 1985.





Submarine of the project 1710 SS-533 in the South Bay, Sevastopol, August 1996. In the background are two submarines of the project 690 BRAVO and submarine of the project 641 FOXTROT (photo by Ilya Kurganov, taken from <http://roteflotte.de> )



Experimental submarine SS-533 pr.1710 - BELUGA ( <http://roteflotte.de> )



Experimental submarine SS-533 pr.1710 - BELUGA at the Sevastopol roadstead, 1995 (photo by A. Kuzenkov, <http://forum.sevastopol.info> ).

Author: [DIMMI](#)

Created: 23.06.2009 00:13:50

Comments: [6](#)

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[pr.18280](#)

DATA FOR 2013 (standard update)

Project 18280

"Yuri Ivanov"

"Ivan Khurs"





Large reconnaissance ship / special communications vessel. The project was developed by the Iceberg Central Design Bureau (St. Petersburg). The ship is being built by the Severnaya Verf Shipyard (St. Petersburg). The lead ship of the project, Yuri Ivanov, was laid down on December 27, 2004. By its decision No. 597 of September 10, 2012, the Federal Service for Defense Contracts included the Severnaya Verf Shipyard, part of the United Shipbuilding Corporation, in the register of sole suppliers of Russian military equipment as the sole supplier of the special communications vessel, Project 18280.

The launch of the ship was planned for 2012, but due to irregular financing and violation of the terms of delivery of equipment by contractors (Kolomensky Zavod - propulsion system), it was postponed to 2013. The second ship of the project is also planned to be laid down in 2013. On June 13, 2013, the ship was rolled out of the slipway onto the open slipway of the Severnaya Verf. For almost three months, the ship was on the open slipway - the installation of the mast and superstructure was completed. September 2013 "Yuri Ivanov" was launched. Then, within six months, the vessel will be completed afloat and in 2014, after the necessary tests, it will be delivered to the customer ( [source](#) ).

The special communications vessel is designed to provide communications and fleet control, conduct radio intelligence and electronic warfare.



In the launching dock, the special communications vessel "Yuri Ivanov", project 18280, shipyard "Severnaya Verf", St. Petersburg, September 30, 2013 ( <http://www.news.cn> ).



In the launching dock, the special communications vessel "Yuri Ivanov", project 18280, shipyard "Severnaya Verf", St. Petersburg, September 30, 2013 ( <http://www.news.cn> ).





Special communications vessel "Yuri Ivanov", project 18280 ( <http://bastion-karpenko.ru> ).

Author: [DIMMI](#)

Created: 27.03.2013 13:01:04

Comments: [25](#)

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### 100mm B-34 mount

**DATA AS OF 2012 (standard replenishment)**

**B-34 / B-34USM / B-34USMA - 100 mm/56 Model 1934**

★★★

Universal single-gun 100-mm artillery mount. The basic model of the B-34 mount was created at the Bolshevik plant in 1936. The experimental model of the B-34 was manufactured at the Bolshevik plant in mid-1937 and its testing began at NIMAP in August. According to the act of September 21, 1937, this model was returned to the plant for revision. Twice - in December 1938 and in 1939 - field tests were completed with a similar act. The first mounts were mounted on Project 26 cruisers without electric motors of the synchronous power transmission system (SSSP). In 1939, the B-34 mounts were finally brought to completion and accepted into service. Before the war, the industry managed to produce 42 B-34 mounts. A more advanced B-34USM mount was developed by TsKB-34 in 1948 for use under the control of the Zenit-42 launcher using the new SSSP MISS-42. In 1948-1953, 114 B-34USM mounts were produced. Later, in 1953, the mounts were modernized according to the Resolution of the USSR Council of Ministers No. 214-129ss of February 14, 1955 "On the adoption of the 100 mm single-gun universal artillery mount B-34-USMA-1 into service with the Naval Forces."



Installation B-34U-1, Victory Museum on Poklonnaya Hill, Moscow ( <http://www.la-star.ru> ).



Installation B-34USM, Victory Museum on Poklonnaya Hill, Moscow ( <http://www.technic-memorial.narod.ru> ).

Author: [DIMMI](#)

Created: 22.01.2009 22:38:42

Comments: 2

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## 85mm installation 90-k

90-k

1 x 85 mm artillery mount. Adopted into service in the mid-1940s.



The breech of the 90K gun in the Malaya Zemlya Museum, Novorossiysk, 08.08.2009 (photo - V.P. Galin, <http://ru.wikipedia.org> ).

Author: [DIMMI](#)

Created: 22.01.2009 22:35:26

Comments: 1

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## Archipelago / Seliger

DATA AS OF 2013 (standard replenishment)

Complex "Arkhipelag"

Complex "Seliger" with submarine-carrier pr.611P

★★★



A towed underwater vehicle complex / research complex with an observation camera. The official version states that in order to detect American sonar cables located at the entrances to domestic naval bases, it was planned to create and test a complex of countermeasures. At a depth of up to 2,000 meters, the cables were buried 40-50 centimeters into the ground, and at greater depths they simply lay on the bottom. During the threat period, it was planned to destroy the cables remotely from a ship or aircraft ( [source](#) ). Apparently, the complex of means included a submarine with means for detecting cables on the seabed and a deep-sea vehicle for precise identification and determination of cable coordinates.

For the needs of the Main Directorate for Deep-Sea Research (GUGI) of the USSR Navy, in the 1960s, the 170th Separate Design and Technology Bureau (former SKB-1 KMOLZ) developed a project for a complex with a towed vehicle with a large immersion depth. At the Kronstadt Marine Plant (KMOLZ), a prototype of the towed vehicle "Arkhipelag" was built with a surface carrier ship and with the crew transferring from the carrier to the vehicle through a hatch located in the upper part of the vehicle. During full-scale deep-sea tests without a crew in 1967, a depth of 2000 m was reached. With a crew, a depth of 1500 m was reached during ocean tests. Tests in the Baltic ended with the destruction of the vehicle "Arkhipelag" - during one of the surfacings, the entrance hatch was overwhelmed by a wave and the vehicle sank. In total, at least three autonomous descents were made ( [source](#) ).

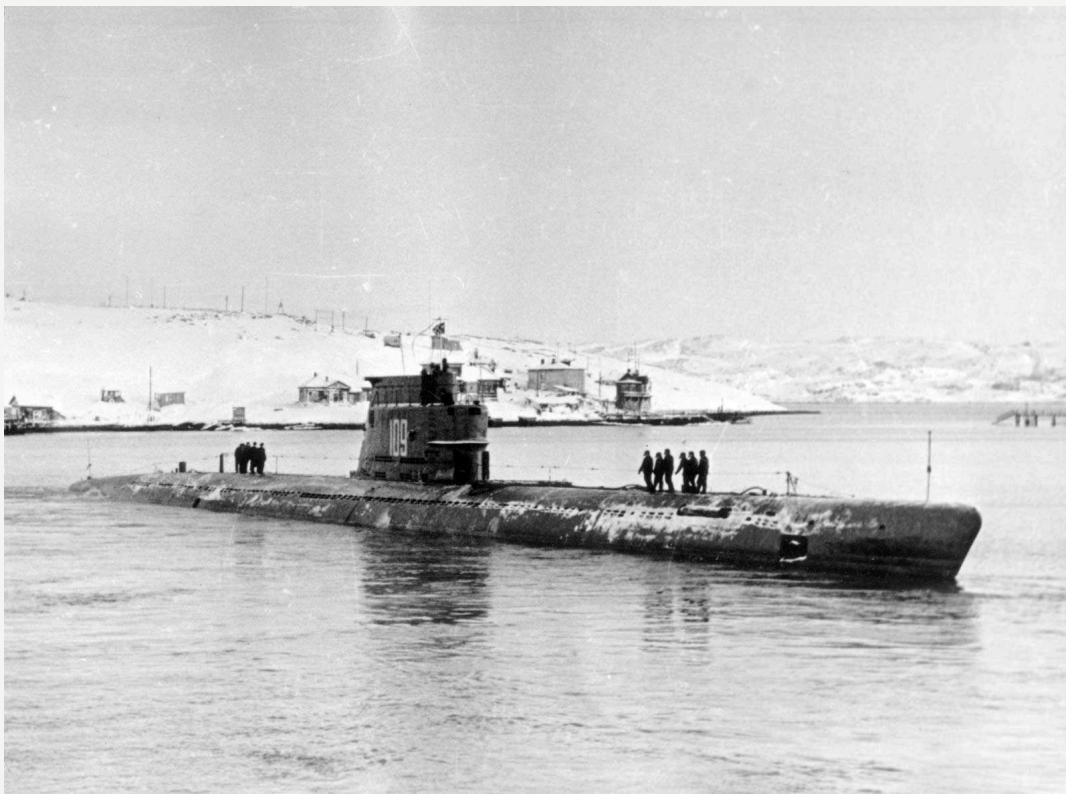
The serial towed vehicle "Seliger" was immediately designed with a carrier - a submarine and without a hatch in the upper part of the hull. A submarine was chosen as a carrier, among other things, in order to reduce the dependence of the apparatus on weather conditions. It was decided to use the submarine of [project 611 - ZULU](#) as a carrier. The technical design of the complex was completed by SKB-170 in 1967. A total of three apparatuses were built at the Kronstadt Marine Plant (KMOLZ) in 1970.



Models of towed vehicles "Seliger". OOO "Korvet", Severodvinsk, 2012 ( <http://www.corvette-shipmodels.ru> ).



The BS-69 carrier submarine on a voyage. The crew is working with a cable-rope. Possibly, the photo is from 1988 (photo from the Volk archive, <http://tsushima.su> ).



Submarine of Project 611 ZULU-II, Northern Fleet ( <http://militaryphotos.net> ). According to the article by A.V. Burilichev "Deep-sea technical means" ( [source](#) ), the photo shows the submarine carrier of the underwater vehicles "Arkhipelag" and "Seliger" - BS-69 - either this is a mistake or the photo shows the B-69 submarine before it was equipped with a new sonar and re-equipped.

Author: [DIMMI](#)

Created: 23.11.2012 23:32:24

Comments: [27](#)

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## pr.690 - BRAVO

DATA FOR 2013 (standard update)

pr.690 "Kefal" - BRAVO

C-368

C-226

C-256

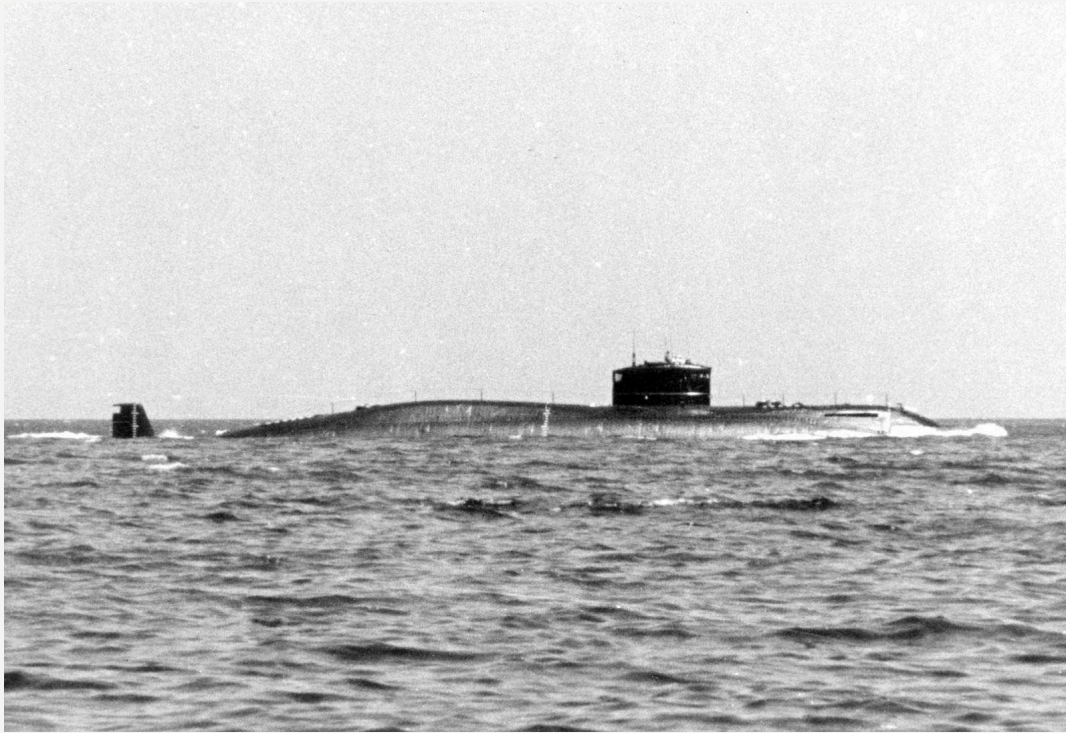
C-310



Medium diesel-electric target submarine ("S"). R & D was started by the decree of the USSR Council of Ministers dated February 28, 1963 at TsKB-112 (later renamed TsKB "Lazurit") jointly with the A.N. Krylov Central Research Institute and the 1st Central Research Institute of the Navy. Chief Designer E.V. Krylov. The main goal of creating the target submarine was to ensure testing of new anti-submarine weapon systems using a full-scale model of a potential enemy submarine in a real situation. The technical design was developed in 1963 without a preliminary design. The target submarines were built at Plant No. 199 "Leninskogo Komsomol" (Komsomolsk-on-Amur). The lead



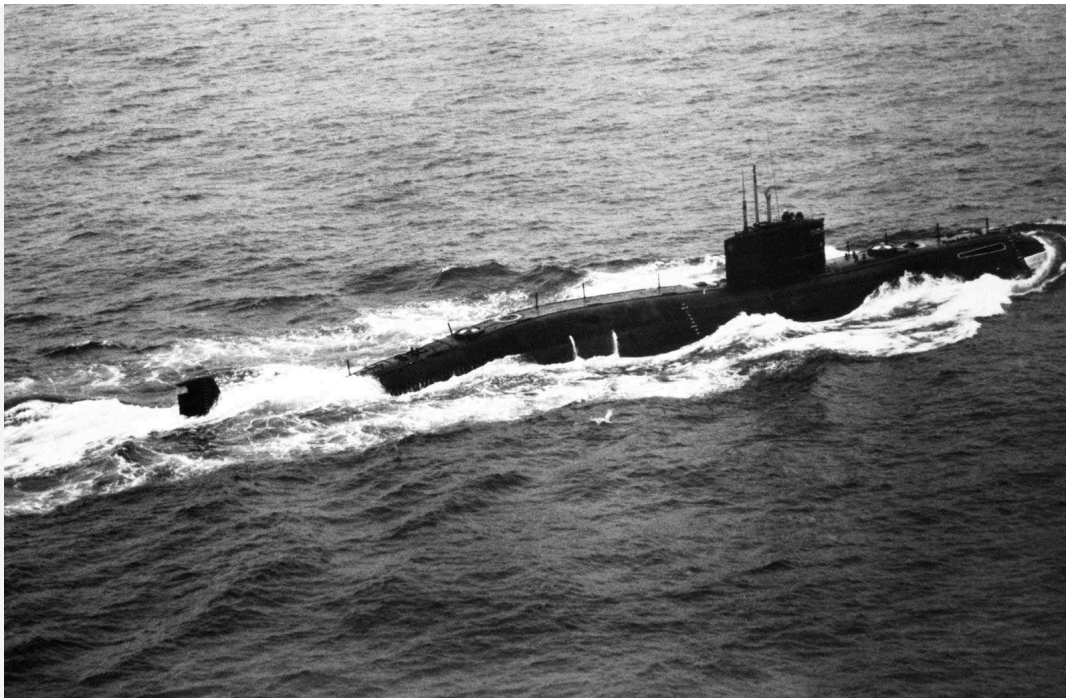
submarine of the project (S-368) was laid down on September 20, 1966, launched on September 3, 1967 and accepted by the Navy on December 31, 1967. In total, 4 submarines of Project 690 were delivered to the Navy in the period up to October 31, 1970.



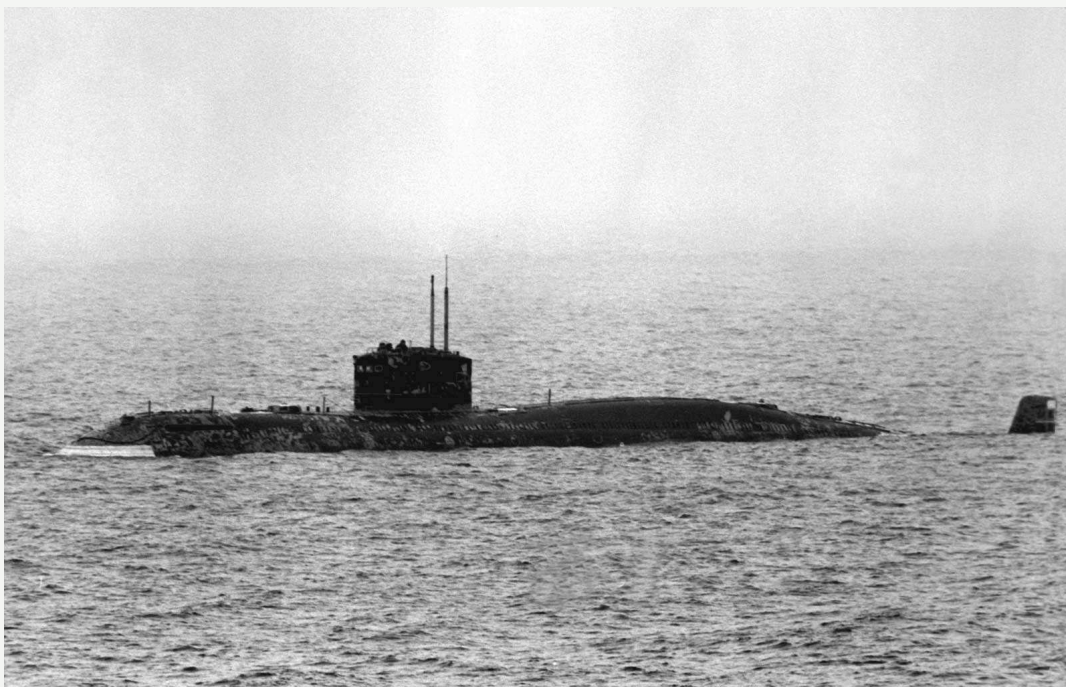
The S-310 target submarine, project 690 BRAVO, of the USSR Navy during testing (photo from the Volk archive, <http://tsushima.su> ).



Target submarine pr.690 BRAVO of the USSR Navy, Sevastopol, 1974 (photo from murzik's archive, <http://forums.airbase.ru> ).



Target submarine pr.690 BRAVO of the USSR Navy (photo US NAVY, 1983, <http://www.defenseimagery.mil> ).



Target submarine pr.690 BRAVO of the USSR Navy (photo US NAVY, 1985, <http://www.defenseimagery.mil> ).





Target submarine pr.690 BRAVO USSR Navy, 1980s - early 1990s (photo - G.G. Kisilev, <http://forums.airbase.ru> ).



Target submarine S-310 pr.690 BRAVO of the Russian Navy, Black Sea Fleet, 1992 (photo from the archive of vas63, <http://tsushima.su> ).

Author: [DIMMI](#)

Created: 17.06.2009 22:45:44

Comments: [12](#)

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## SET-40 / SET-40U

**DATA AS OF 2011 (standard replenishment)**

**SET-40 / MGT-2 / product 241**

**SET-40U / product 241**

**SET-40UL "Lotsman" / product 241**

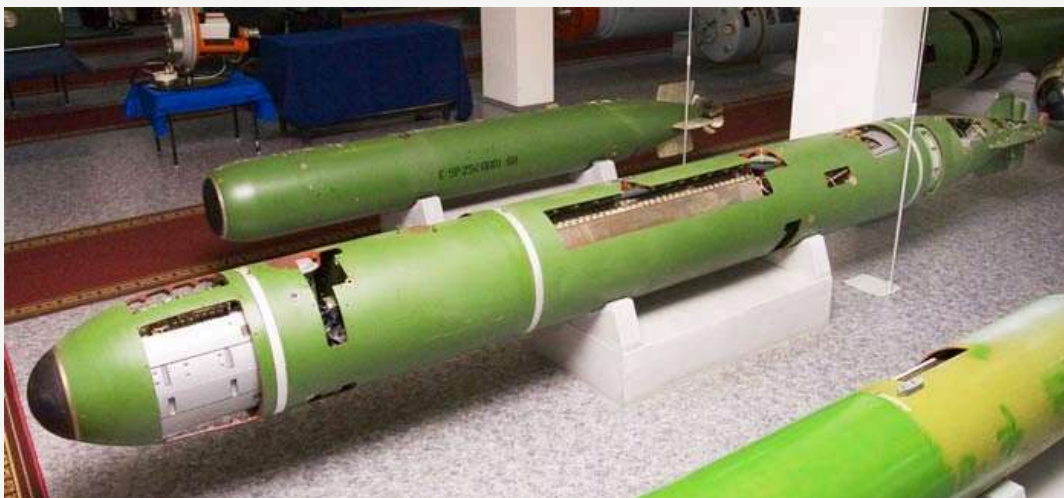
**SET-40UE / product 241**

★★★

Anti-submarine homing electric torpedo / universal torpedo ( according to TsNII Gidropribor ). The torpedo was developed at NII-400 (TsNII Gidropribor) taking into account the experience of creating the [SET-53](#) and [MGT-1](#) torpedoes . Chief Designer - V.I. Senderikhin. The torpedo was the first in the USSR to use an active-passive acoustic homing system (SSN). The preliminary design of individual units of the motion control system began in 1959. Testing of the torpedo began on Lake Ladoga in 1961. The torpedo was accepted into service in 1962. Serial production was carried out at the Dagdizel plant (Kaspiysk, Dagestan).



Torpedo SET-40 on display at the Black Sea Fleet Museum, Sevastopol (photo by A. Brichevsky, <http://flot.sevastopol.info> ).



Torpedo SET-40U with Sapphire homing system. Museum of the Central Research Institute Gidropribor, 2010 (photo by V. Zamyatin and E. Erokhin, <http://www.missiles.ru> ).



i-korotchenko.livejournal.com

Sample of torpedo SET-40 at the Baltic Fleet Museum, 2013 (photo by I. Korotchenko, <http://i-korotchenko.livejournal.com> ).

Author: [DIMMI](#)

Created: 15.02.2011 23:39:54

Comments: [16](#)

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## pr.21630 Buyan - BUYAN

DATA FOR 2013 (standard replenishment)  
pr.21630 "Buyan " - BUYAN  
"Astrakhan"





"Volgodonsk"  
 "Makhachkala"  
 ★★★★★

Small artillery ship (MAK) of the 3rd rank of the "river-sea" class / corvette. The MAK series is intended to arm the Caspian Flotilla. MAK pr.21630 was developed by Zelenodolsk Design Bureau, chief designer - Kushnir Ya.E., scientific and technical support - 1 Central Research Institute of the Ministry of Defense of Russia. The decision to build a series of ships of the project was made in August 2002 as part of the shipbuilding program for the Caspian Flotilla. The lead ship of the series was laid down at the Almaz Shipyard in St. Petersburg on 30 January 2004, launched on 7 October 2005 and entered service with the Navy in 2006. From 2005 to early July 2006, the lead ship Astrakhan underwent state tests of the 3M47 Gibka air defense missile system for small-tonnage vessels with Igla missiles. In total, it is planned to build a series of 10 ships by 2016, of which 5 ships are intended for the Caspian Flotilla. According to other data, it was planned to build 7 ships by 2010 inclusive (in service as of 1 September 2010 - 1 unit). As of 2006, the Almaz Shipyard planned to build 1 ship per year.

According to As of June 1, 2012, the MAK "Volgodonsk" is at the Almaz Shipyard (St. Petersburg) - work is underway on the ship. The MAK "Makhachkala" is also at the Almaz Shipyard undergoing completion, without its main artillery mount (the ship was launched on April 27, 2012). On June 29, 2012, the Russian Navy Flag was raised on the MAK "Volgodonsk" in St. Petersburg (the ship was accepted into the Navy on December 20, 2011).



Navy Flag Raising Ceremony on Project 21630 MAK Makhachkala, Kronstadt, March 2, 2013 (photo by Alexander Pak, <http://sashapak.livejournal.com> ).



Installation of the A-190-01 artillery mount on Project 21630 MAK Makhachkala. Almaz Shipyard in Saint Petersburg, August 29, 2012 ( <http://docklife.ucoz.ru> ).



Project 21630 MAK Volgogradsk at the Almaz Shipyard in Saint Petersburg, June 1, 2012 (photo by pfc-joker, <http://pfc-joker.livejournal.com>).



Project 21630 MAK Astrakhan, 2006 ( <http://militaryphotos.net> )

Author: [DIMMI](#)

Created: 30.08.2010 21:29:34

Comments: [2](#)

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## pr.11434 - Modified KIEV

**DATA AS OF 2012 (standard replenishment)**

**project 11434 - Modified KIEV**

"Baku" / "Admiral of the Fleet of the Soviet Union Gorshkov"

**project 11430 - "Vikramaditya"** (separate article)

★★★★



Heavy aircraft-carrying cruiser (TAKR). After the appointment of D.F. Ustinov as the Minister of Defense of the USSR, it was decided to build a modernized aircraft-carrying cruiser of Project 11434 on the basis of the hull of Project 1143 instead of the aircraft carrier of Project 1153 with improved electronic equipment and for basing VTOL aircraft. The ship was designed by Nevskoye Design Bureau, the chief designer was V.F. Anikiev. According to the project, the TAKR of Project 11434 was to be based on supersonic VTOL Yak-141 aircraft, which significantly increased its combat effectiveness compared to the TAKR of Project 1143. The only ship of the Baku project (factory No. 104) was laid down on slipway "0" of the Nikolaev shipyard on 26.12.1978. Construction of the second ship of the project with factory No. 105 was started by the decision of the USSR Ministry of Shipbuilding Industry dated 15.12.1980 and lasted 1.5 years, after which it was stopped (several hull sections were assembled). Launched on 31 March 1982 (according to the plan - the end of 1981). From 2 June to 1 December 1986, she underwent mooring trials and on 9 January 1987 she began sea trials. State trials of the TAKR "Baku" began on 21 April 1987. The ship entered the Navy on 11 December 1987 (signing of the acceptance certificate). The Navy flag was raised on December 20, 1987, and on December 30, 1987, the ship was commissioned into the Northern Fleet.





The tugboat "Niklai Chiker" leads the aircraft carrier "Admiral Gorshkov" project 11434 to the embankment of the PO "Sevmash", July 1999 (photo from the archive of Oleg Kuleshov, <http://kuleshovoleg.livejournal.com/> ).



Aircraft carrier "Baku" project 11431 in the Mediterranean Sea, June 1988 ( <http://www.nashflot.ru> ).



TAKR "Baku" pr.11434 in the Mediterranean Sea, 1988 (photo - Chris Howell, <http://www.shipspotting.com> ).

Author: [DIMMI](#)

Created: 26.06.2010 06:36:01

Comments: [12](#)

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### 76.2 mm installation AK-176 / AK-176M

**DATA AS OF 2013 (standard replenishment)**

**Complex AK-176-MR-123/176, AK-176 / A-221 installation**

**Complex AK-176-MR-123-02/176, installation AK-176M**

★★★

1 x 76.2 mm artillery mount. The tactical and technical specifications for the development of the A-221 artillery mount were approved by the Deputy Commander-in-Chief of the USSR Navy on September 30, 1969. Development began in accordance with the decree of the USSR Council of Ministers dated March 15, 1971, at the Burevestnik Central Research Institute (created on the basis of the Gorky Machine-Building Plant Design Bureau in 1970), chief designer G.P. Ryndyk. According to other sources ( [source](#) ), development of the mount began in late 1968, simultaneously with the development of the 57-mm [A-220](#) mount .

Field tests of the A-221 mount were conducted from April 14 to July 14, 1977 at Rzhevka (near Leningrad) in the amount of 3,215 rounds. The R&D work was officially completed in 1978 ( [source](#) ). Naval trials were conducted from 23 to 30 January 1979 in the area of the Baltiysk naval base on the lead missile boat R-5, project 1241.1. The installation is produced at the Gorky Machine-Building Plant and at the Arsenal Production Association. It was accepted into service by order of the USSR Ministry of Defense No. 101 of 22 June 1979.

The AK-176-MR-123-02/176 complex with the AK-176M installation was developed between 1984 and 1991. According to unconfirmed official data, the last AK-176 installation for the domestic Navy was delivered to the SKR Dagestan, [project 11661K](#) .





Installation of AK-176 on the PSKR "Almaz" (IMDS-2005 exhibition, St. Petersburg, <http://www.warships.ru> )



Installation of AK-176M, model (Brochurevstnik Federal State Unitary Enterprise Design Bureau, St. Petersburg, 2009-2010).

Author: [DIMMI](#)

Created: 22.01.2009 00:24:47

Comments: 2

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